



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,760	07/31/2004	Joyce L. Buchanan	JB01	4759
27797	7590	05/02/2007	EXAMINER	
RICHARD D. FUERLE 1711 W. RIVER RD. GRAND ISLAND, NY 14072			SPEKTOR, MAXIM	
		ART UNIT	PAPER NUMBER	
		1709		
		MAIL DATE		DELIVERY MODE
		05/02/2007		PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/710,760	BUCHANAN ET AL.
	Examiner Maxim Spektor	Art Unit 1709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 July 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 July 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 7/31/2004.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1,3,4,6,7,9,12,14,15,16,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Non-Patent Literature Hydraulic Manufacturing Company: Kinetic Water Ram (see enclosed pamphlet, henceforth KWR) In view of Dural et al. (USP# 6,941,589 henceforth '589).

Claim 1:

KWR teaches a kit used for cleaning out drains and other plumbing fixtures including a water ram device and a set of expansion plugs of differing diameters having an aperture of the same diameter throughout fitting to the end of the water

Art Unit: 1709

ram device (picture at the top of included pamphlet). The picture at the top of the page shows several plug assemblies that are attached via a screw-on coupling to the air ram. All of these plugs are intended to attach to the same orifice and hence must have the same diameter of coupling as well as pipe that connects the air ram to the actual plug.

KWR does not teach a flow control valve or a fitting designed to hook up to a pressurized water line.

'589 teaches a conduit (Fig 2 Part 11), controlled by a ball valve (Part 13 and col 3 lines 35-40), with a first end that is attachable to a pressurized water line (Part 12 and col 3 lines 14-25) and a second end that includes a stopper (Part 19) capable of forming a tight fluid seal (Abstract). The stopper is made of neoprene, a synthetic rubber (col 4 lines 47-50). The stopper is also removable and attached by a bushing to the rest of the apparatus (col 4 lines 58-65). The valve is made of plastic or metal making it rigid (col 4 lines 19-24), similarly the conduit that the valve controls is made of PVC which is also rigid (col 3 lines 45-49).

It is prudent to look at '589 since it is in the same field of endeavor as KWR, that being the clearing a plugged pipe from an obstruction.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a kit comprising a solid body controlled with a valve, having two ends, one of which is attachable to a pressurized water source and the other attachable to a variety of stoppers included in the kit and having a central bore and capable of forming a watertight seal with an orifice in order to

provide a pipe de-clogging system capable of using an externally pressurized water feed to clear out more stubborn clogs.

Claims 3, 4, 6:

KWR and '589 disclose the claimed invention except for the exact sizes of the stoppers in the kit. '589 additionally discloses that the aperture in the stoppers should be between $\frac{1}{2}$ " and $\frac{3}{4}$ ", specifically, about $\frac{5}{8}$ " in diameter (col 1 lines 45-50). It would have been an obvious matter of design choice to accommodate an appropriate aperture in the stopper as well as to have chosen stoppers of a size appropriate to filling common pipe sizes. In fact KWR lists several sizes of stoppers that closely approximate the sizes listed in the claims. This modification would have involved a mere change in the size of the plug component. A change in size is generally recognized as being within the level of ordinary skill in the art.

In re Rose, 105 USPQ 237 (CCPA 1955).

Claim 7:

'589 teaches a straight extension piece (Fig. 2 Part 24) capable of accepting a rubber stopper at one end and is attached to the valve body at the other end (Fig. 1).

Claim 9:

KWR teaches an instruction packet printed on the inside of a case used for holding the kit (see attached pamphlet).

Claim 12:

The kit has been discussed in detail above.

KWR does not disclose a method for the use of the invention.

'589 discloses a method for using the kit including:

cleaning the drain line of an unvented plumbing fixture (i.e. clearing a line that

carries water)

providing valve body having a first end and a second end, a seal fastened to the
second end (i.e. rigid conduit with plug)

Connecting the first end of the valve body to a pressurized water supply line (i.e.
connecting said first end of said rigid conduit to a water source under pressure)

Compressing the seal against a drain line to obtain a substantially fluid tight seal
(i.e. pressing said stopper against said opening)

Switching the valve to a flow-position for a sufficient time to remove the blockage
(opening said valve, whereby pressurized water flows through said line).

All of these aspects are discussed in Claim 9 of '589.

The reason to look at '589 has been discussed above.

Therefor it would have been obvious to one of ordinary skill in the art at the time
the invention was made to have used the kit as described above in the manner
that is stipulated by '589 in order to usefully operate a pipe clog dislodging kit.

Claim 14, 17:

The method of operating the kit has been discussed above.

Using the kit for a thru-hull, drain, discharge line, or cooling line for an engine, air
conditioning, refrigeration or water generation system on a water-going vessel is
discussed in the background of '589 specifically stating that the method and

Art Unit: 1709

apparatus of the invention are to be used for clearing drains or pipes in such devices as boats.

Claim 15:

The use of a stopper with the kit, a set of stopper of varying size, the inclusion of a rigid conduit has all been discussed above. Additionally the female fitting of the first end is noted in '589 (col 3 lines 15-21).

Claim 16:

The use of rigid conduit is discussed in '589 Claim 7 as the process of extending the retractable conduit connected to the second end and attaching a stopper to the end of it.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over KWR in view of '589 and in further view of Perry (USP# 2,055,801 henceforth '801).

KWR teach a 22" rubber extension hose included in the kit, which is clearly capable of accepting one of the set of expansion plugs into one end and attachable to the water ram device at the other end. This tube is also clearly flexible. Neither KWR nor '589 teach that a 90-degree angle is possible using their listed means of extension.

'801 clearly illustrates that a flexible hose (Fig 1 Part 19) can be made into a 90-degree angle.

It is prudent to look at '801 because it is in the same field of endeavor as both KWR and '589, all three of which deal with a drain unclogging system.

Art Unit: 1709

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the above-discussed invention of Claim 1 that also included the rubber hose of KWR or the straight extension of '589 and the 90-degree flexing capability for the rubber hose of '801 in order to have made a drain unclogging system with the ability to reach tight spots.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over KWR in view of '589 and in further view of Cruzan et al. (USP# 4,198,777 henceforth '777).

The combination of KWR and '589 disclose the claimed invention except for the use of materials in manufacturing of the invention, specifically the use of plastic for the container of the kit. Instead KWR indicates that the kit box is made of metal.

'777 teaches a container for general storage as well as for fishing tackle (Background). The box is preferably constructed of clear plastic allowing easy observation of the tackle stored therein. The arrangement of the compartments for storage in the center frame and covers provides an interesting, compact, readily usable arrangement of minimum size. (col 2 lines 50-55).

It is prudent to look at '777 since it concerns a storage container with several compartments much like the one pictured in KWR.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a clear plastic in the creation of a container, which is currently listed as made of metal since it has been held to be within general skill of a worker in the art to select a known material on the basis of

suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over KWR in view of '589 and in further view of Rochelle (USP# 5,775,743 henceforth '743).

The combination of KWR and '589 disclose the claimed invention including the creation of the rigid, valved conduit from PVC ('589 col 5 lines 15-20).

Neither KWR nor '589 teach the use of polyamide for the creation of the rigid, valved conduit.

'743 teaches that parts of plumbing system may be made of either PVC or polyamide (col2 lines 44-54).

It is prudent to look at '743 since it discusses the use of a polyamide for the creation of plumbing components much like '589.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used polyamide in the creation of a plumbing pipe, which is currently listed as made of PVC since it has been held to be within general skill of a worker in the art to select a known material on the basis of suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over KWR in view of '589 and in further view of Frankel (Facility Piping Systems Handbook, see attached printouts).

The kit and method of kit use have been discussed above.

KWR does not teach the use of kit with a water pressure of 35 to 65 psi.

'589 teaches the use of the kit with a municipal water outlet (Fig 1).

Frankel states that a water outlet for a hose cannot operate below a pressure of 30 psi and is not safe at a pressure of greater than 80 psi.

Hence it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a pressure between 30 and 80 psi such as 35-65 psi in order to operate said kit following said method using a municipal water outlet in order to properly dislodge a pipe clog.

8. Claim 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over KWR in view of '589 and in further view of Hawthorne Rubber Manufacturing Corp. (see attached printout, henceforth HRM) and Sexsmith (USP# 5,907,015 henceforth '015).

KWR in combination with '589 as discussed above use neoprene ('589 col 4 lines 40-50) as the material of the stopper. KWR clearly shows that the stoppers are of differing sizes.

Styrene-butadiene (SBR) as the material of the stopper is not discussed. The taper and the length of the plugs is not discussed in either '589 or KWR. It is clear from KWR that the differing sized plugs are used to fit differing sized orifices.

'015 discusses that it was known in the art at the time the invention was made that that neoprene is an artificial rubber much like SBR (col 4 lines 1-10).

HRM indicates that a standard stopper is made of Styrene-Butadiene Rubber, that it can have a length between $\frac{3}{4}$ " to 1 31/32" and a taper between 4.5 and 15 degrees.

It is prudent to look at '015 because it discusses the use of artificial rubbers, which are a component of '589.

It is prudent to look at HRM because it discusses the manufacture of rubber plugs that are discussed in '589 and pictured in KWR.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used SBR in the creation of a stopper, which is currently listed as made of neoprene since it has been held to be within general skill of a worker in the art to select a known material on the basis of suitability for the intended use as a matter of obvious design choice and because HRM demonstrated that SBR stoppers are available in a variety of sizes. In *re Leshin*, 125 USPQ 416.

Therefore it would have been recognized as obvious to one of ordinary skill in the art at the time the invention was made to have used SBR plugs with a length between $\frac{3}{4}$ " and 1 31/32" and a taper of 5 to 15 degrees in providing a plug used for a pipe clog dislodging device that could fit several different orifices.

9. Claims 18-20 are rejected under 35 U.S.C. 103(a) as unpatentable over KWR in view of '589, as applied to claims 1,7,9,12 and 14 above and further in view of '801 for the reasons stated for claim 2 above, '777 for the reasons stated above for claim 10 and '743 for the reasons stated for claim 11 above.

Art Unit: 1709

The kit of Claim 1 and the method of Claims 12 and 14 have been discussed above.

The addition of a 90-degree elbow to the kit has been discussed under Claim 2.

The use of a clear plastic box for the kit has been discussed under Claim 10.

The use of polyamide for the rigid conduit has been discussed under Claim 11.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have to have combined the 90-degree elbow, the rigid extension rod, the rigid valve, and instruction set, the clear plastic box and the multi-sized SBR stoppers into one kit in order to have a versatile kit having the ability to unclog different sized drains on a sea-going vessel using pressurized water in a variety of positions and settings. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to have used the method as described above to operate this kit.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bailey (USP# 3,109,178) and Hughes et al. (USP# 6,775,857).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maxim Spektor whose telephone number is

571.270.1869. The examiner can normally be reached on Monday through Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571.272.1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Max Spektor


MICHAEL B. CLEVELAND
SUPERVISORY PATENT EXAMINER